

DSC-02002

REMARKS

Claims 1-38 are pending in the present application Claims 1, 16, 32, and 36 have been amended, leaving Claims 1 - 38 for consideration upon entry of the present Amendment.

Claim rejections under 35 U.S.C. § 102

Claims 1-2, 4, 10-13, 16-19, 22-27, 29-38 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,375,580 to Stolz et al. Applicants respectfully traverse this rejection.

Independent Claim 1 is directed to a method for generating electricity comprising, *inter alia*, "capturing boiled off hydrogen gas from the storage tanks", "storing the hydrogen gas" and "fueling a hydrogen conversion device with the stored hydrogen gas."

Stolz et al. teaches of a locomotive powered by refrigerated liquefied methane ("RLM"). The system taught by Stolz includes a number of heat exchanger loops to allow selective heating and/or cooling of different components such as the compressed intake air and the fuel gas vaporizer. RLM from tank 18 passes through the vaporizer 6 in preparation for use as a fuel in the engine 2. To vaporize the RLM, Stolz utilized a heat exchange fluid (Column 5, lines 20-53) to transport heat from the intake combustion air to the vaporizer 6. The system further includes a storage tank 11 for the heat exchange fluid, which is preferably a ethylene-glycol-water solution.

To anticipate a claim, a reference must disclose and every element of the claim, *Lewmar Marine v. Variet Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987).

In making the anticipation rejection, the Examiner appears to have misconstrued the claims. In Claim 1, Applicants claim requires that boiled off hydrogen gas is captured from a storage tank, is subsequently stored and then used to fuel a hydrogen conversion device.

In contrast to Applicant's Claim 1, Stolz et al. teaches of a heat exchanger which utilizes fluid such as ethylene-glycol-water to transport heat to a vaporizer which converts the liquid RLM to a gas. The Examiner's attention is directed to Column 5, lines 48-49 which states that the tank 11 is utilized for expansion of the ethylene-glycol fluid, and not RLM gas. Applicant's Claim 1 requires that the hydrogen gas be captured from a storage tank and stored. Stolz et al. does not teach any such step. As such, the anticipation rejection is improper. Therefore, Applicants submit that Claim 1 patentably defines over Stolz et al. Moreover, Claims 2, 4, and 10 also patentably define over Stolz et al. as depending from independent Claim 1. Accordingly, reconsideration and allowance of claims 1, 2, 4, and 10 are respectfully requested.

For the same reasons set forth above with respect to Claim 1, Applicant respectfully submits that the rejections of independent Claims 11, 16, 25, 29, 32 and 36 are improper. Therefore, Applicants submit that independent Claims 11, 16, 25, 29, 32 and 36 are patentably defined over Stolz et al. Moreover, Claims 12, 17-19, 26-27, 30-31, 33-35 and 37-38 which depend either directly or indirectly from independent Claims 11, 16, 25, 29, 32 and 36 also patentably define over Stolz et al. Accordingly, reconsideration and allowance of claims 11-12, 16-19, 25-27, 29-31, 32-35 and 36-38 are respectfully requested.

DSC-02002

Claim rejections under 35 U.S.C. § 103(a)

Claims 3, 5-6, 14-15, 20-21, 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,375,580 to Stolz et al. in view of U.S. Patent 6,543,229 to Johansson.

Claim 3 which depends indirectly from independent Claim 1 and incorporates all of the limitations of Claim 1 requires that boiled off hydrogen gas be captured from a storage tank, stored and used to fuel a hydrogen conversion device that generates electricity. Claim 3 adds a further requirement that waste heat from the internal combustion engine be collected. For reasons set forth above with respect to Claim 1, Applicant respectfully submits that neither Stolz et al. nor Johansson teach or suggest the method for generating electricity as claimed in Claim 3. Applicant respectfully submits that, at best, if Stolz et al. and Johansson were combined, the Stirling engine taught by Johansson would replace one of the heat exchange units, such as radiator 15, taught by Stolz et al. Therefore, applicants submit that Claim 3 patentably defines over Stolz et al. in view of Johansson. Accordingly, reconsideration and allowance of Claim 3 is respectfully requested.

For the same reasons set forth above with respect to Claim 3, Applicant respectfully submits that the rejections of Claims 5-6, 14-15, 20-21 and 28 are also improper. Therefore, applicants submit that Claims 5-6, 14-15, 20-21 and 28 are patentably defined over Stolz et al. in view of Johansson. Accordingly, reconsideration and allowance of Claims 5-6, 14-15, 20-21 and 28 is respectfully requested.

Claims 7-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,375,580 to Stolz et al.

Claims 7-9 which depend directly or indirectly from independent Claim 1 and incorporates all of the limitations of Claim 1 require that boiled off hydrogen gas be captured from a storage tank, stored and used to fuel a hydrogen conversion device that generates electricity. Claims 7-9 adds a further requirement that specific flow rates be provided to the hydrogen conversion device. For reasons set forth above with respect to Claim 1, Applicant respectfully submits that Stolz et al. does not teach or suggest the method for generating electricity as claimed in Claim 3. Therefore, applicants submit that Claims 7-9 are patentably defined over Stolz et al. Accordingly, reconsideration and allowance of Claims 7-9 is respectfully requested.

For at least the foregoing reasons, Applicants respectfully request withdrawal of these rejections.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly reconsideration and allowance is requested.

Respectfully submitted,

By: 

Dave S. Christensen
Registration No. 40,955

Date: December 23, 2003
Address: 10 Technology Drive, Wallingford, CT 06492
Telephone: 203-678-2122
Facsimile: 203-949-9016
Customer No.: 31661